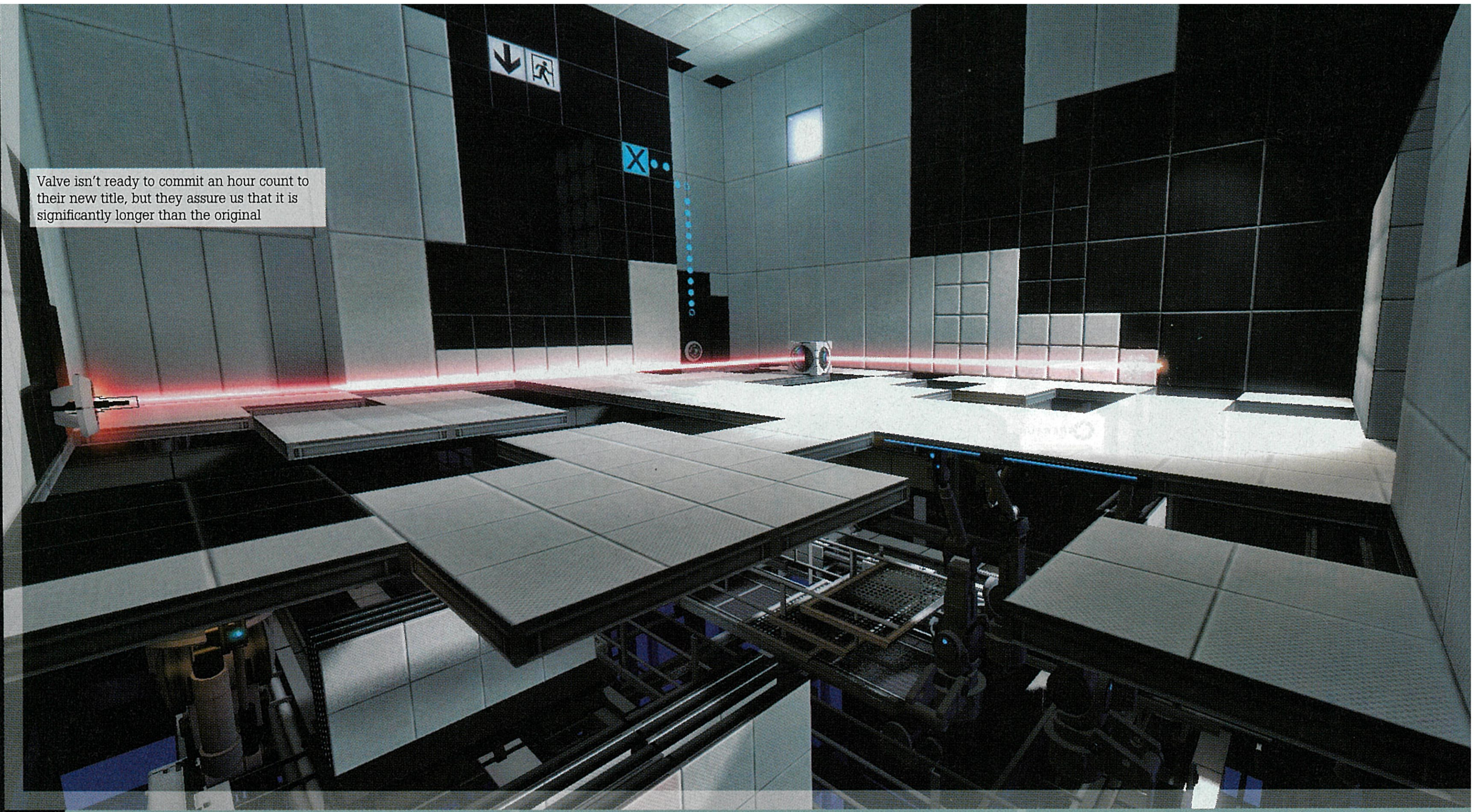

Valve isn't ready to commit an hour count to their new title, but they assure us that it is significantly longer than the original

Thinking With **Portals**

Explaining the concept of Portal's mind-bending puzzles to a layman would likely result in head scratching, but the game did a wonderful job of building up difficulty and teaching players new ways to think about problem solving as they progressed through the facility. Getting players to reach the elevated level of consciousness needed to "think with portals" in a way that doesn't frustrate them isn't easy, so Valve makes it immediately clear that augmented mechanics and new gameplay elements in Portal 2 haven't been created to make you pull your hair out.

"It's worth clarifying our approach to Portal 2," Johnson begins. "It's less about putting a portal on the wall and walking through it and more about making people think differently while they are playing the game. And making people feel smart while they are playing the game. And really surprising people with this kind of video game. We're not aiming to make this an action or twitch game – that seems way off track. There are many more elements that we are adding to Portal 2 – it's a bigger game and stands on its own – but it isn't about making a really hard game. It's more interesting to simply reward your thinking."

To keep players in the realm of familiarity, your Aperture Science Handheld Portal Device remains unchanged in the sequel. Valve realises that two connecting portals remain the best way to communicate with your environment.

The original Portal used repetition and pitch-perfect pacing to train players to understand a very foreign concept. After some training, players began to associate objects with mechanics. Boxes designated a nearby button. Angled concrete slabs indicated flinging was in order. These types of associations are expanded upon in Portal 2, largely because of a new approach to environmental design.

"The world was a series of constraints telling you what you couldn't do in Portal – you could place a portal here and couldn't place a portal there," Johnson explains. "In a lot of ways it was a very binary interaction with the world. In Portal 2 the surfaces and objects in the world have a bunch of different states. The surfaces themselves can be changed to alter the way you can navigate through the world. And then there are other physical forces that you can use as well. To put it simply, you can send physics through the world."

Portal physics is a game changer. Now physical forces can bleed through carefully placed portals, resulting in an increased number of ways to interact with your environment. Continuing our demo, Valve walks us through a string of carefully composed test chambers to illustrate these new mechanics. Vital Apparatus Vents – connected to the pipe network as a means of distributing objects to test chambers – produce strong suction where they terminate. Now Chell can use this to her advantage. Placing a portal under the tube and another under an unsuspecting turret, the threat is immediately leeched upwards and eliminated. During the demo, we watch this concept applied to a test chamber littered with objects. When Chell places the portal in the centre of the mass, it creates a swirling vortex of debris.

The tractor beam, another new addition, acts in a similar manner. A cylinder of oscillating blue rings, tractor beams can be combined with portals to transport Chell or objects to otherwise unreachable areas. Projected bridges – a translucent but solid walkway – can also be redirected through portals. These two additions indicate that flinging may be less of a crutch in this iteration.

The most significant physics upgrade Valve introduces is the concept of paint, which gives players more control over their environment than ever before. Toward the end of the demo we come upon a test chamber slick with an orange substance across the floor. Upon closer inspection, we discover that walking on the surface will rocket Chell to high speeds, allowing her to vault over pits or reach the far end of a long expanse quickly enough to best a ticking clock. These liquids are dynamic and play quite well with portals. Placing a portal under a paint vent and another on a wall, we were able to coat specific areas of the chamber in order to progress past an obstacle.

A second paint type is introduced in another puzzle. Blue paint transfers its properties to any object it touches, giving them a trampoline-like surface. Coating parallel walls on either side of a large pit, Chell ricochets back and forth across the gap. Plastering paint all over a weighted storage cube causes it to barrel across the room, shattering glass and taking out turrets in its path. The expanded gameplay produced by these two paint types alone is staggering, and Valve indicated a willingness to include more if it sees fit.

A few smaller mechanics also join Chell's arsenal. Redirection Cubes – similar in size and shape to a Weighted Storage Cube, only with reflective surfaces on each face – allow players to redirect laser beams into awaiting receptacles. Aerial Faith Plates are an exercise in trust. These platforms fling Chell high into the air, allowing her to bridge massive gaps or place portals in otherwise inaccessible areas. Weighted Storage Balls are the last new feature on the roster, which function exactly like their cube counterparts, except they are paired with buckets instead of buttons.

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